



Transportation Permits Policy Memorandum

To: Region Managers and Permits Personnel

From: Rich Williams, Chief
Transportation Permits Branch

Subjects: Green Weight on Boom Support Dollies

Date: April 24, 2000

Policy: TPPM 2000-2

Objective

To provide for improved design capabilities in the crane industry.

Existing Documentation

Section 305.3.6 of the Transportation Permits Manual states that “the gross weight imposed on the highway by the wheels of any one axle of a boom dolly or boom trailer shall not exceed 18,000 pounds and the gross weight upon any one wheel or wheels supporting one end of such axle, and resting upon the roadway shall not exceed 9,500 pounds.”

Background

Extralegal weight truck cranes often use dollies to support the boom while operating on California highways. Due to concern for the unknown effects of dynamic weight transfer, Caltrans would not issue permits for extralegal weight on dollies. In fact, pre-1983 legal weight limits of 18,000 pounds on single axles and 32,000 pounds on tandems are the maximum weight allowable weights on crane boom dollies. For years, crane owners and manufacturers persistently lobbied Caltrans to grant heavier weight allowances on boom dollies.

In May 1999, Caltrans oversaw a field test on a purple weight Grove model GMK 6300B truck crane with a boom dolly artificially loaded to purple weight. One-half inch plywood strips were placed in several predetermined positions to simulate rough pavement conditions. A pavement mounted weigh-in-motion station verified the dynamic weights on the carrier and the dolly axles at 40 mph. In response to the favorable test results, Caltrans granted extralegal green weight on the boom dolly of the Grove GKM 6300B crane, provided that the entire combination was routed as a 9-axle purple weight combination.

Transportation Permit Manual Changes

- 1) Change the above sentence from Section 305.3.6 to read as follows:

With the exception of truck cranes with “purple” weight carriers with hydrogas suspension, and air ride suspension on the boom dolly, the gross weight imposed on the highway by the wheels of any one axle of a boom dolly or boom trailer shall not exceed 18,000 pounds and the gross weight upon any one wheel or wheels supporting one end of such axle, and resting upon the roadway shall not exceed 9,500 pounds.

- 2) Add the following paragraph to Section 305.3.6:

Truck cranes with "purple" weight carriers with hydrogas suspension, and air ride suspension on the boom dolly, may qualify for "green" weight on the dolly axles. The Office of Structures Maintenance and Investigations will determine the appropriate vehicle configuration (9-axle "purple", 7-axle "purple", etc.) to be used for routing.



RICH WILLIAMS, Chief
Transportation Permits Branch

April 24, 2000

Date